

## ABSTRACT

A receiving antenna RA of a receiving unit RU is positioned at an inner diameter side of a rotation locus of a transmitting unit TU when a tire T rotates. Consequently, it shortens a reaching distance of electromagnetic waves and lessens its change, thereby making it easy to keep a stable receiving sensitivity state. Moreover, the receiving antenna RA is made of a wire of a predetermined length that is made integral inside a wire harness WH connected to the receiving unit RU. Consequently, it becomes easy to make the receiving antenna RA in a length of  $\lambda/4$  of a wavelength  $\lambda$  of the electromagnetic waves in use, a length of an integral multiple thereof, or  $5/8 \lambda$ . As a result, the receiving sensitivity can be improved.